3 SYSTEM DEMANDS

3.1 WATER CONSERVATION BILL OF 2009 - BASELINES AND TARGETS

Urban Water Management Planning Act Requirement:

10608.20(e) An urban retail water supplier shall include in its urban water management plan … due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

In order to improve the Sacramento-San Joaquin Delta, in 2008 Governor Schwarzenegger directed State water agencies to develop a plan to achieve a twenty percent per capita water use reduction by the year 2020. The Water Conservation Act of 2009 (Senate Bill x7-7), passed in November 2009, provides the legislative framework to implement the conservation goals, and requires retail water suppliers to detail their strategy for achieving the reduction requirement in their 2010 Urban Water Management Plan Updates. The Urban Water Management Planning Act and SBx7-7 can be found in Appendices C and D of this document, respectively.

Explicit methodologies were developed by the California Department of Water Resources (DWR) to assist retail water suppliers in complying with the Water Conservation Act of 2009, and they are detailed in the technical document, "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use." The City of Huntington Park utilized the DWR methods when determining its baseline, interim, and water use target values, the steps of which are described in detail in the following sections.

The methodologies laid out by DWR instruct urban water suppliers to determine their baseline and target water use values through performing four main steps, which are as follows:

- Step 1: Determine Base Daily Per Capita Water Use
- Step 2: Determine Urban Water Use Target
- Step 3: Compare Urban Water Use Target to the 5-year Baseline (verification of 95% minimum reduction requirement)

- Step 4: Determine Interim Urban Water Use Target

Water suppliers are given the option of determining their 20x2020 target values either individually, or through a regional alliance. The City of Huntington Park elected not to join a regional alliance, and has determined its baseline and target values individually.

3.1.1 Step 1: Determine Base Daily Per Capita Water Use

Baseline daily per capita water use is defined as an urban water supplier's estimate of its average gross water use, reported in gallons per capita per day (GPCD) and calculated over a continuous base period.

Steps 1A – 1C: Determine Supplier 10- to 15-year, and 5-year Base Periods

Urban retail water suppliers are required to choose a continuous, 10-year baseline period ending no earlier than December 31, 2004 and no later than December 31, 2010 when determining Base Daily Per Capita Water Use. The option to extend the baseline to a 15-year period is given to water suppliers if recycled water accounts for at least 10 percent of their 2008 retail water deliveries. The City of Huntington Park's recycled water deliveries were approximately one percent of its 2008 total, and therefore a 10-year baseline period was chosen; July 1st, 2000 through June 30th, 2010.

The 5-year baseline period is used to determine the retail water supplier's minimum water use reduction, and the period must end no earlier than December 31st, 2007 and no later than December 31st, 2010. July 1st, 2003 through June 30th, 2008 was chosen as the 5-year baseline period for the City of Huntington Park. Table 3.1.1 summarizes the City of Huntington Park's baseline period selections.

Table 3.1.1
Base Period Ranges

Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	5,241	*acre-ft*
	2008 total volume of delivered recycled water	60.29	*acre-ft*
	2008 recycled water as a percent of total deliveries	1.15%	Percent
	Number of years in base period	10	Years
	Fiscal Year beginning base period range	2001	
	Fiscal Year ending base period range	2010	
5-year base period	Number of years in base period	5	Years
	Fiscal Year beginning base period range	2004	
	Fiscal Year ending base period range	2008	

Units: acre-feet per year

Steps 1D – 1E: Estimate Service Area Population

The City of Huntington Park Water Department's service area encompasses more than 95% of the City's limits. Therefore, the California Department of Finance (DOF) E-4 Population Estimates for the City of Huntington Park were used to estimate the service area's total population for the baseline years (2001 – 2010).

Step 1F: Calculate Gross Water Use

The City of Huntington Park receives potable water from two sources; imported water, purchased through the Central Basin Municipal Water District (CBMWD), and groundwater, extracted via a series of wells. Recycled water is used exclusively for irrigation purposes, and was therefore excluded from the gross water use calculations. Total annual volumes (reported for each fiscal year) of groundwater and imported water entering the City's distribution system were obtained from the Central Basin's Watermaster Service Reports. A summary of the calculations, highlighting the steps described in DWR's guidance document, is shown in Table 3.1.2.

Table 3.1.2
Gross Water Use Calculations

Utility Name: City of Huntington Park	12-month period from: 1-Jul to 30-Jun	Volume Units: Million Gallons

		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
1	Volume from Own Sources (raw data)	1418	1718	1520	1286	1285	1189	1201	1216	1179	1139
2	Volume from Imported Sources (raw data)	520	233	362	604	504	584	557	492	472	439
3	***Total Volume Into Distribution System = Line 1 + Line 2***	*1938*	*1951*	*1882*	*1890*	*1789*	*1773*	*1757*	*1708*	*1650*	*1577*
4	Volume Exported to Other Utilities (raw data)	-	-	-	-	-	-	-	-	-	-
5	Change in Distribution System Storage (+/-)	-	-	-	-	-	-	-	-	-	-
6	***Gross Water Use Before Indirect Recycled Water Use Deductions = Line 3 - Line 4 - Line 5***	*1938*	*1951*	*1882*	*1890*	*1789*	*1773*	*1757*	*1708*	*1650*	*1577*
7	Indirect Recycled Water Use Deduction	-	-	-	-	-	-	-	-	-	-
8	***Gross Water Use After Indirect Recycled Water Use Deductions = Line 6 - Line 7***	*1938*	*1951*	*1882*	*1890*	*1789*	*1773*	*1757*	*1708*	*1650*	*1577*
9	*Water Delivered for Agricultural Use (optional deduction)*	-	-	-	-	-	-	-	-	-	-
10	*Process Water Use (optional deduction)*	-	-	-	-	-	-	-	-	-	-
11	**Gross Water Use After Optional Deductions**	***1938***	***1951***	***1882***	***1890***	***1789***	***1773***	***1757***	***1708***	***1650***	***1577***

Steps 1G – 1I: Determine Annual and Base Daily Per Capita Water Use

Annual daily per capita water use for the City of Huntington Park was estimated by dividing the gross water use by the service area's total population for each year of the baseline period. The average of these values over the 10-year baseline was then determined, giving the Base Daily Per Capita Water Use for the City of Huntington Park; **77 GPCD**.

Table 3.1.3 summarizes the data used to determine the City's Base Daily Per Capita Water Use.

Table 3.1.3
Base Daily Per Capita Water Use — 10-Year Range

Base period year		Distribution System Population	Daily System Gross Water Use (MGD)	Annual Daily Per Capita Water Use (GPCD)
Sequence Year	Fiscal Year Ending			
Year 1	2001	62,080	5.31	86
Year 2	2002	62,850	5.34	85
Year 3	2003	63,840	5.16	81
Year 4	2004	64,265	5.18	81
Year 5	2005	64,466	4.90	76
Year 6	2006	64,362	4.86	75
Year 7	2007	64,285	4.81	75
Year 8	2008	64,270	4.68	73
Year 9	2009	64,376	4.52	70
Year 10	2010	64,219	4.32	67
Base Daily Per Capita Water Use				77

3.1.2 Determine Urban Water Use Target

The Water Conservation Act of 2009 provides the retail water supplier the choice of four methods for determining the urban water use target value. The four methods are:

- Method 1: 80% of Base Daily Per Capita Water Use Value
- Method 2: Performance Standards
- Method 3: 95% of the Hydrologic Region 2020 Target Value
- Method 4: Water Savings (developed by DWR)

The City of Huntington Park decided upon Method 3 for determining its water use reduction

target, as it provides a goal that is most appropriate for the City's future plans. Huntington Park is located in the South Coast hydrologic region, which was assigned a 149 GPCD water use target. Ninety five percent of the region's target, or **142 GPCD**, was therefore chosen as the City of Huntington Park's Urban Water Use Target. However, the City of Huntington Park will strive to maintain consumption under 100 GPCD.

3.1.3 Confirm Urban Water Use Target

The Water Conservation Act of 2009 sets a minimum reduction requirement the water supplier's urban water use target must meet or exceed. The minimum reduction is defined as 95 percent of the 5-year baseline period's Base Daily Per Capita Water Use. However, a water supplier is excluded from this requirement if the 5-year Base Daily Per Capita Water Use is equal to or less than 100 GPCD. The City of Huntington Park's 5-year Base Daily Per Capita Water Use is 76 GPCD, and the City is therefore excluded from the minimum reduction requirement. The Urban Water Use Target is confirmed at 142 GPCD. Table 3.1.4 provides a summary of the 5-year baseline calculations.

Table 3.1.4
Base Daily Per Capita Water Use — 5-Year Range

Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Fiscal Year Ending			
Year 1	2004	64,265	5.18	81
Year 2	2005	64,466	4.90	76
Year 3	2006	64,362	4.86	75
Year 4	2007	64,285	4.81	75
Year 5	2008	64,270	4.68	73
Base Daily Per Capita Water Use				76

3.1.4 Determine Interim Urban Water Use Target

The interim urban water use target is defined as the water use goal the water supplier is to achieve and report in the 2015 UWMP Update, and equals half of the target 2020 reduction. However, since the City of Huntington Park is under 100 GPCD, there is no required consumption reduction, thus, the interim urban water use target for the City of Huntington Park is **100 GPCD** to maintain eligibility for the consumption reduction exemption.

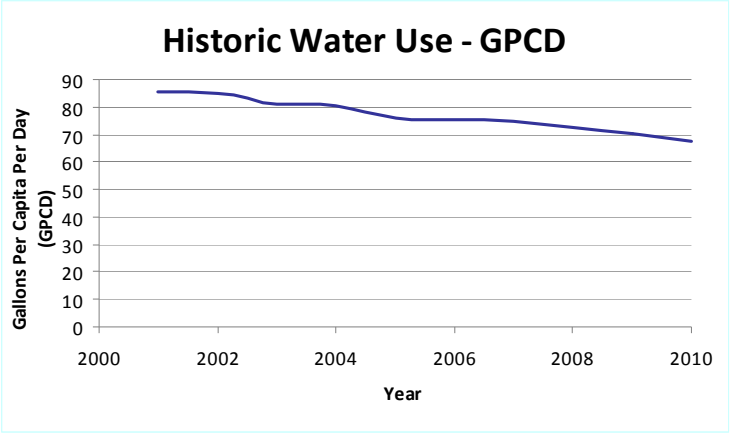
3.2 WATER DEMANDS

Urban Water Management Planning Act Requirement:

10608.20(e)(1)&(2) Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural.

3.2.1 Historic Water Use

Figure 3.2.1 – Historic Water Use



The City of Huntington Park's Water System currently serves approximately 64,000 people within its service area. With the City being almost completely built-out, significant growth or increase in water demands are not anticipated in future years.

Key factors that affect water demands are; population growth, increases in land use development, industrial growth and reductions in annual rainfall. For the City of Huntington Park, population and rainfall exhibit the greatest influence. Usage of water per capita day has been steadily decreasing throughout the past ten years, as shown in Figure 3.2.1. Consumption has ranged from a low 67 GPCD in 2010 to a maximum of 86 GPCD in 2001. The average use per day during the period from 2001 through 2010 was 77 gallons per person.

Table 3.2.1
Historic Water Use

Fiscal Year	Gross Water Use (MGY)	Population	Usage Per Capita Day (GPCD)
2001	1,938	62,080	86
2002	1,951	62,850	85
2003	1,882	63,840	81
2004	1,890	64,265	81
2005	1,789	64,466	76
2006	1,773	64,362	75
2007	1,757	64,285	75
2008	1,708	64,270	73
2009	1,650	64,376	70
2010	1,577	64,219	67

The City of Huntington Park's past water use and number of customer connections for the 2005 calendar year are shown in Table 3.2.2, separated by water use sector. In 2005, the City separated water use into the following sectors; residential, commercial, multi-unresidential, and other.

Table 3.2.2
Water Deliveries — Actual, 2005

	2005				
	Metered		Not Metered		Total
Water Use Sectors	**# of Accounts**	**Volume**	**# of Accounts**	**Volume**	**Volume**
Residential	2,705	1,722	0	0	1,722
Multi-unresidential	2,019	2,823	0	0	2,823
Commercial/Industrial/Governmental	1,003	1,646	0	0	1,646
Other	-	110	0	0	110
Total	5,727	6,301	0	0	6,301

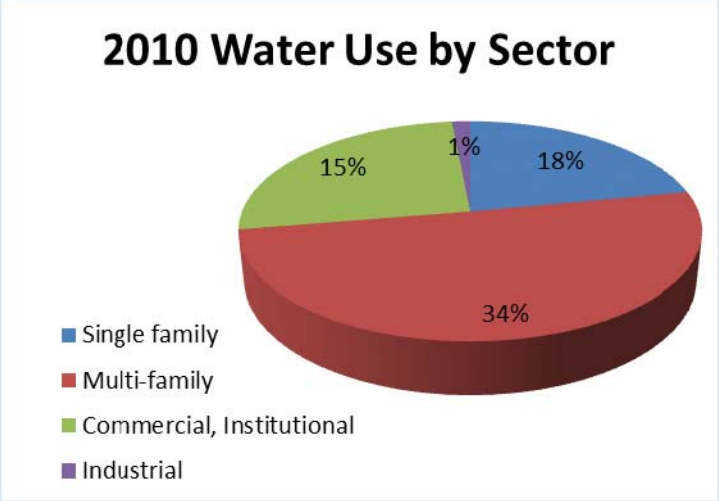
Units: acre-feet per year

3.2.2 Current and Projected Water Use by Sector

In 2010, the City used 4,568 acre-feet of water, as measured by metered sales and reported in the City's Public Water System Statistics (PWSS) annual filings. Average water deliveries, shown in Figure 3.2.2, are broken down into the following sectors:

- Single Family Residential
- Multi-Family Residential
- Commercial/Institutional
- Industrial

Figure 3.2.2 –Water Deliveries



Number of connections and water use are projected for the next 20 years, in five year increments, and are broken down by sector. The future estimations of water use and connections (by sector) are extrapolated based on the current (2010) values, anticipated population growth, and the Interim (2015) and Final (2020) Target Water Use Reduction Goals.

Residential Sector

As Tables 3.2.3 – 3.2.6 indicate, the majority of the water demand in the community will continue to be in the residential sector. Due to the lack of available space, the City of Huntington Park does not have plans for new residential development in the near future. In the next 20 years, some form of residential redevelopment may occur; however, such development is not expected to place a heavy demand on the City's water supply. Additionally, reclaimed water use is not expected to expand to the residential sector during the planning period.

Commercial/Institutional Sector

Commercial and institutional water deliveries are combined into a single sector for the City of Huntington Park. Water demand for this sector has remained fairly stable over the past few years. Current and projected water demands for the City's commercial/institutional sector are shown in Tables 3.2.3 – 3.2.6.

Industrial Sector

Industrial water demand has also remained fairly stable over the past few years. Similar to residential development, no new form of large industrial development is anticipated in the near future that will increase industrial water demand. Current and projected water demands for the City's industrial sector are shown in Tables 3.2.3 – 3.2.6.

Landscape Sector

Reclaimed water deliveries are used for landscape irrigation at the Salt Lake Park, and the quantities are tracked by the City of Huntington Park. However, other landscape water use is not tracked by the City. Recycled water deliveries are provided in Table 3.2.8.

Agricultural Sector

The City of Huntington Park does not provide potable water for agricultural uses.

Table 3.2.3
Water Deliveries — Actual, 2010

	2010				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	3,278	1,004	0	0	1,004
Multi-family	2,203	2,302	0	0	2,302
Commercial/Institutional	1,050	1,193	0	0	1,193
Industrial	57	69	0	0	69
Landscape	0	0	0	0	0
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	6,588	4,568	0	0	4,568

Units: acre-feet per year

Table 3.2.4
Water Deliveries — Projected, 2015

	2015				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	3,354	1,246	0	0	1,246
Multi-family	2,254	2,855	0	0	2,855
Commercial/Institutional	1,074	1,480	0	0	1,480
Industrial	58	86	0	0	86
Landscape	0	0	0	0	0
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	6,740	5,667	0	0	5,667

Units: acre-feet per year

Table 3.2.5
Water Deliveries — Projected, 2020

	2020				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	3,431	1,274	0	0	1,274
Multi-family	2,306	2,921	0	0	2,921
Commercial/Institutional	1,099	1,514	0	0	1,514
Industrial	60	88	0	0	88
Landscape	0	0	0	0	0
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	6,896	5,798	0	0	5,798

Units: acre-feet per year

Table 3.2.6 Water Deliveries — Projected 2025 and 2030				
	2025		2030	
	metered		metered	
Water use sectors	# of accounts	Volume	# of accounts	Volume
Single family	3,511	1,304	3,592	1,334
Multi-family	2,359	2,989	2,414	3,058
Commercial/Institutional	1,125	1,549	1,151	1,585
Industrial	61	90	62	92
Landscape	0	0	0	0
Agriculture	0	0	0	0
Other	0	0	0	0
Total	7,056	5,932	7,219	6,070

Units: acre-feet per year

3.2.3. Sales to Outside Agencies

The City of Huntington Park does not sell wholesale water to other agencies. Table 3.2.7 is provided to quantify that Huntington Park does not intend to sell water to other water agencies within the planning period.

Table 3.2.7 Sales to Other Water Agencies						
Water Distributed	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Not Applicable	0	0	0	0	0	0
Total	0	0	0	0	0	0

Units: acre-feet per year

3.2.4. Other Water Uses and Losses

Recycled water is delivered to the City by CBMWD and is currently used for irrigation uses. The demand on the recycled water system is largely dependent on the development of the system by CBMWD. Currently, the Salt Lake Park is the only recipient of recycled water in the City. Total deliveries of recycled water are expected to remain relatively constant throughout the planning period, shown in Table 3.2.8.

Systems losses were estimated by subtracting the total metered deliveries for the year from the total water volume into the system (well production and imported water). The remainder was considered water losses and/or other, unaccounted-for water uses. In 2010, water losses averaged approximately 5%. It should be noted that water losses include water used for city buildings, as well as hydrant flushing and firefighting. Projected system losses were estimated

based on this average throughout the planning period. The system losses are summarized in Table 3.2.8.

Table 3.2.8
Additional Water Uses and Losses

Water Use	2005	2010	2015	2020	2025	2030
Saline barriers	N/A					
Groundwater recharge	N/A					
Conjunctive use	N/A					
Raw water	N/A					
Recycled water	55	51	51	51	51	51
System losses	310	273	283	290	297	303
Other (define)	N/A					
Total	365	324	334	341	348	354

Units: acre-feet per year

3.2.5 Total Water Demands

The total past, current, and future water demands for the City of Huntington Park are summarized in Table 3.2.9.

Table 3.2.9
Total Water Use

Water Use	2005	2010	2015	2020	2025	2030
Total water deliveries (Tables 3.2.2 to 3.2.6)	6,191	4,568	5,667	5,798	5,932	6,070
Sales to other water agencies (Table 3.2.7)	N/A	N/A	N/A	N/A	N/A	N/A
Additional water uses and losses (Table 3.2.8)	365	324	334	341	348	354
Total	7,896	4,892	6,001	6,139	6,280	6,424

Units: acre-feet per year

3.2.6 Lower Income Housing Projections

Urban Water Management Planning Act Requirement:

10631.1(a) The water use projections required by Section 10631 shall include projected water use for single-family and multi-family residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

Table 3.2.10 summarizes the lower income water use projections for the City of Huntington Park, and the lower income water demands are also included as part of the total residential water demand estimates and projections in Tables 3.2.3 – 3.2.6. The Housing Element of the City of Huntington Park's General Plan was used to obtain the lower income housing data, and estimates through 2014 were provided. Demand projections beyond 2014 were estimated based on 2014 values and overall population growth to determine lower income housing needs throughout the entire UWMP planning horizon.

Table 3.2.10
Low-Income Projected Water Demands

Low Income Water Demands	2015	2020	2025	2030
Single-family residential	3	6	10	13
Multi-family residential	2	4	6	9
Total	5	11	16	22

Units: acre-feet per year

3.3 WATER DEMAND PROJECTIONS

Urban Water Management Planning Act Requirement:

10631(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for the inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

The City of Huntington Park relies on wholesale water from the Central Basin Municipal Water District as one of the primary sources of water. Table 3.3.1 is provided to quantify the district demand projections provided to CBMWD for incorporation into the CBMWD's Urban Water Management Plan.

Table 3.3.1 Retail Agency Demand Projections Provided to Wholesale Suppliers					
Wholesaler	**2010**	**2015**	**2020**	**2025**	**2030**
CBMWD	1,558	1,699	1,851	2,013	2,163
Total	1,558	1,699	1,851	2,013	2,163

Units: acre-feet per year

3.4 WATER USE REDUCTION PLAN

Urban Water Management Planning Act Requirement:

CWC §10608.29 Urban wholesale water suppliers shall include in the urban water management plans … an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part (10608.36). Urban retail water suppliers are to prepare a plan for implementing the Water Conservation bill of 2009 requirements and conduct a public meeting which includes consideration of economic impacts.

SBx7-7 allows for retail water suppliers whose Base Daily Per Capita Water Use is below 100 GPCD to be excluded from further reducing their per capita water demand. The City of Huntington Park, whose Base Daily Water Use is 77 GPCD, meets this criterion and is not required to further reduce its per capita water use. The City is committed to meeting the twenty percent statewide reduction goal set forth by SBx7-7 and will ensure that water conservation programs and efficient water use continue to be implemented within its service area. As part of this effort, the City will monitor the per capita water use during the upcoming years to verify its per capita water use remains below 100 GPCD.

Additionally, the City will evaluate the long term potential for recycled water use at the following locations:

- Los Angeles Unified School District Public School #5 adjacent to Salt Lake Park
- Los Angeles Unified School District Public High School #7
- Raul Perez Park
- Railroad Landscape Area